

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph [0025] beginning on page 15 as follows:

[0025] With reference to FIG. 3, the optical signals (i.e., the wavelength multiplexed signal) inputted into the MMF ~~331a-311a~~ are inputted into the FBG 451a via the circulator 411a. The FBG 451a reflects an optical signal being in a mode having a particular propagation constant β_{11} , and transmits the other optical signals. The reflected optical signal being in a mode having the propagation constant β_{11} is inputted into the MMF 331a via the circulator 411a. Similarly, optical signals respectively being in modes respectively having propagation constants β_{12} to β_{1x} are respectively reflected by the FBGs 452a to 45xa, and respectively inputted into the MMFs 332a to 33xa, respectively via the circulators 412a to 41xa. In other words, by setting the propagation constants β_{11} to β_{1x} of the optical signals respectively reflected by the FBGs 451a to 45xa as propagation constants of fundamental modes of the wavelengths λ_1 to λ_x , the mode processing section 400 extracts, from the wavelength multiplexed signal, only optical signals respectively being in the fundamental modes respectively having the wavelengths λ_1 to λ_x .